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**UNITED STATES DISTRICT COURT
CENTRAL DISTRICT OF CALIFORNIA**

COLUMBIA PICTURES
INDUSTRIES, INC., *et. al.*

Plaintiffs,

v.

GARY FUNG, *et. al.*

Defendants.

Case No. CV-06-05578 SVW (JCx)

The Hon. Stephen V. Wilson

**DECLARATION OF BRUCE J.
WARD IN SUPPORT OF
PLAINTIFFS' MOTION FOR
SUMMARY JUDGMENT ON
OWNERSHIP AND DIRECT
INFRINGEMENT**

(REDACTED VERSION)

DECLARATION OF BRUCE WARD

I, Bruce J. Ward, declare as follows:

1. I am the President and owner of IP Intelligence Inc. ("IP Intelligence"), a company I started in the summer of 2004. In this capacity, I provide technical consulting services to copyright owners, with a primary focus on the collection, management, and analysis of computer data pertaining to the online piracy of copyrighted works.

2. Prior to holding this position, in January 2000, I founded NetPD Ltd. ("NetPD"), which provided a broad range of technical services to content companies around the world. I was the primary technical architect for that company. NetPD was later acquired by Broadchart Limited in early 2003, and I continued to serve as an executive at NetPD until I started IP Intelligence.

3. My clients over the years have included, among others, the Motion Picture Association of America, Nintendo, Electronic Arts, the International Federation of the Phonographic Industry, Sony Music Entertainment, and the Recording Industry Association of America.

4. I am submitting this declaration in support of Plaintiffs' Motion for Summary Judgment on Copyright Ownership and Direct Infringement. The statements made in this declaration are based on my personal knowledge. If called upon as a witness, I would testify as to the matters contained herein.

Defendants' Website Server Log Data

5. At the direction of Plaintiffs' counsel, I analyzed Defendants' website server log data from Isohunt.com, Torrentbox.com, and Podtropolis.com (each a "Fung Website" and, collectively, the "Fung Websites") in order to: (i) identify dot-torrent files associated with Plaintiffs' copyrighted movies and TV shows; and (ii) confirm whether those dot-torrent files had been downloaded by Fung Website users in the United States.

6. By way of background, and as I understand from my own personal experience and from a Declaration of Ellis Horowitz, dated March 16, 2007, Defendants run a web server program for each of the Fung Websites, which contains “logging” functionality. Decl. of Ellis Horowitz in Supp. of Pls.’ Mot. For Evidentiary Sanctions, dated Mar. 16, 2007 ¶¶ 9-12 (ECF No. 71). The logging functionality saves information to Defendants’ servers whenever a Fung Website user clicks on a link to a page or a file on one of the Fung Websites. *Id.* In particular, if a user clicks on a “download torrent” link on a Fung Website, Defendants’ web servers receive the user request and automatically record into a log file certain information, including the IP address of the user requesting to download the dot-torrent file. *Id.* These records are referred to as “Download Events.”

7. Defendants made three separate productions of website server log data to Plaintiffs during the course of this litigation, containing Download Events: one in June 2007, one in July 2007, and one in late August 2013. The productions contained entries for dot-torrent files downloaded by a Fung Website user between June 15, 2007 and July 11, 2007 and also between May 25, 2008 and May 31, 2010.¹

8. Here is an example of a website server log entry produced by Defendants:

[REDACTED]

9. As shown above, each server log entry contained :

[REDACTED]

¹ I am informed by Plaintiffs’ counsel that Defendants despoiled server log data from roughly July 12, 2007 to May 24, 2008.

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[REDACTED]

[REDACTED]

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[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]⁴

Identification of Dot-Torrent Files Associated With Plaintiffs' Works

10. Plaintiffs' counsel provided me with a list of titles of copyrighted movies and TV shows owned by Plaintiffs. Using this list, I ran keyword searches on Defendants' website server log entries to identify dot-torrent files that were potentially associated with Plaintiffs' works. By way of illustration, Plaintiffs'

² [REDACTED]

³ In some instances, [REDACTED]
[REDACTED]. These were excluded from the identification of dot-torrent files associated with Plaintiffs' works, as described below.

⁴ Defendants did not include this additional information in the logs produced in June and July 2007. Rather, Defendants entirely obfuscated the IP address information from those logs.

1 counsel informed me that Plaintiffs owned the rights to the popular movie “Harry
2 Potter and the Half Blood Prince.” Therefore, I searched Defendants’ server logs
3 for entries containing the phrase “Harry Potter.” Each server log entry containing
4 this phrase was considered a potential match.

5 11. [REDACTED]

6 [REDACTED]
7 [REDACTED], I next checked to confirm that the IP address associated with the
8 log entry corresponded to a user in the United States. To do this, I first replaced the
9 last redacted “octet” with a value of “1” and then searched for the IP address in
10 MaxMind’s GeoIP® database.⁵ The GeoIP® database contains a comprehensive list
11 of known IP addresses, along with each IP addresses’ associated “country code”
12 (e.g., “US,” “UK,” “DE”).

13 12. If the IP address listed in a log entry from Defendants’ servers was not
14 assigned a “US” country code in the GeoIP® database, I excluded the entry from
15 further examination.⁶ However, if the IP address was from the United States,
16 individuals working at the direction of Plaintiffs’ counsel conducted a manual
17

18 ⁵ The GeoIP® database, which is widely used for conducting such geolocation
19 analyses, is available for download at <http://www.maxmind.com/en/country>.

20 ⁶ [REDACTED]

21 [REDACTED]

22 [REDACTED]

23 [REDACTED]

24 [REDACTED]

25 [REDACTED]

26 [REDACTED]

27 [REDACTED]

28 [REDACTED]

1 review of the search query listed in the server log data for each entry⁷ to eliminate
2 any entries that were obviously not associated with Plaintiffs' movies or TV shows.
3 These reviewers eliminated from further consideration server log entries with search
4 queries that indicated that the user was looking for items that were obviously not
5 Plaintiffs' copyrighted works, such as music files (e.g., mp3 files), books, adult
6 content, video games, or other computer software.

7 13. For example, to continue the above illustration, the GeoIP® database
8 indicated that the IP address [REDACTED]
9 [REDACTED]. As such, I forwarded the server log entry to be
10 manually reviewed, as described above. The reviewer viewed the search query
11 contained in the server log ([REDACTED]) and
12 determined whether the log entry corresponded to one of Plaintiffs' works "Harry
13 Potter and the Half Blood Prince" (as is obvious in this example). However, the
14 reviewers would discard server log entries that were evidently associated with the
15 Harry Potter books ([REDACTED]), video games ([REDACTED]
16 [REDACTED]), or music from the Harry Potter movies ([REDACTED]
17 [REDACTED]), but which had been captured by my initial search
18 because the user had searched for a dot-torrent file using the phrase "Harry Potter."

19 14. After the reviewers completed their manual review of potentially
20 matching dot-torrent files, and weeded out obvious false positives, I attempted to

21 ⁷ For a subset of server log entries, I was able to identify the name of the actual dot-
22 torrent file (which is stored in the metadata of the dot-torrent file) by crossing
23 referencing the [REDACTED]
24 [REDACTED]. For these entries, Plaintiffs' counsel
25 conducted a manual review by checking to see whether the name of the dot-torrent
26 file (as opposed to the search query listed in the server log data) corresponded to one
27 of Plaintiffs' works.
28

1 download from the Fung Websites the actual dot-torrent file associated with each
2 remaining server log entry. To do so, I accessed the Fung Websites using a non-
3 U.S. IP address.⁸ I next used a program called Wget to download the torrent files
4 from the Fung Websites, using a URL containing the dot-torrent file's "bt_id".⁹
5 This program allowed me to download the dot-torrent file directly from Defendants'
6 sites without manually entering the URL for each dot-torrent file into an internet
7 browser.

8 15. Once I had obtained the actual dot-torrent file, I loaded the file onto a
9 computer running a BitTorrent client application (the BitTorrent client application
10 that I used was "Transmission," which is available at
11 <http://www.transmissionbt.com/>),¹⁰ which automatically began to download content
12 files associated with each dot-torrent file. I copied all of the content files that I was
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15 ⁸ I was informed by Plaintiffs' counsel that, following the Court's issuance of a
16 permanent injunction, Defendants: (i) purported to filter torrent files associated with
17 Plaintiffs' works from the Isohunt.com website for users with U.S. IP addresses and
18 (ii) blocked users with U.S. IP addresses from accessing the Torrentbox and
19 Podtropolis websites. To ensure that I accessed full versions of the Fung Websites, I
20 created a virtual public network ("VPN") with a computer in the Netherlands, which
21 was assigned a non-U.S. IP address. By doing so, I was able to download any dot-
22 torrent file available on any of Defendants' sites without being subject to the
23 blocking of U.S. IP addresses.

24 ⁹ Wget is a free command-line software package designed to retrieve files over the
25 Internet without having to open up an internet browser. The software is available
26 for download at <http://www.gnu.org/software/wget/>.

27 ¹⁰ Dot-torrent files from Podtropolis and Torrentbox use BitTorrent trackers that
28 block U.S. IP addresses. To download all of the content items associated with
Podtropolis and Torrentbox torrent files, the computer running Transmission used a
VPN with a Netherlands IP address.

1 able to download¹¹ onto a hard-drive and provided this hard-drive to Plaintiffs'
2 counsel on a daily basis. Reviewers working at the direction of Plaintiffs' counsel
3 then manually verified whether the downloaded content item was in fact a copy of
4 one of Plaintiffs' copyrighted works.

5 16. Attached as Exhibit A hereto is a chart summarizing the results of all of
6 the foregoing processes. As the chart demonstrates, at least one dot-torrent file
7 corresponding to an actual, full-length version of each of Plaintiffs' copyrighted
8 works was downloaded by a user in the United States.

9 **Preliminary Assessment of Volume of Dot-Torrent File Downloads In U.S.**

10 17. In addition to conducting the above analysis, Plaintiffs' counsel asked
11 me to calculate the number of U.S. download events for those dot-torrent files
12 confirmed to be associated with Plaintiffs' movies and TV shows, recognizing that
13 there were still many more dot-torrent files for those movies and TV shows on
14 Defendants' websites that have yet to be processed or analyzed. To perform this
15 preliminary analysis, I extracted the unredacted portion of the IP address from each
16 log entry in Defendants' website server logs that had been confirmed to correspond
17 to one of Plaintiffs' copyrighted works (according to the review process described
18 above) and looked up each IP address in the GeoIP® database (using the same
19 geolocation analysis as described above). I next created a subset of [REDACTED]
20 [REDACTED] website server log entries (i.e., Download Events) that contained IP

21 _____
22 ¹¹ Many of the dot-torrent files that I attempted to download did not have any
23 "peers" (i.e., seeders or leechers) sharing the file, due to the age of the dot-torrent
24 file. As a result, a number of dot-torrent files that matched Plaintiffs' works did not
25 result in a successful download, even though a download would have succeeded at
26 an earlier time when the dot-torrent file was popular. In addition, some of the
27 download from dot-torrent files resulted in partial downloads – in other words,
28 downloads that were less than 100% complete, which still contained viewable
content and corresponded to the full-length version of the content file.

1 addresses with only U.S. country code designations. Then, I identified the [REDACTED]
2 [REDACTED]
3 [REDACTED]. I recorded the results of this
4 preliminary analysis in the chart attached hereto as Exhibit A.

5 18. As these results indicate, in most cases, [REDACTED]
6 [REDACTED]. It
7 should be noted, however, that the dot-torrent files on which these calculations are
8 based are merely exemplars that have been downloaded and manually verified,
9 according to the processes outlined above, as being associated with Plaintiffs'
10 works. There are typically many different dot-torrent files for the very same content
11 – sometimes hundreds or even thousands of such files – each corresponding to a
12 different uploader's version of that same content. As a result, the Fung Websites
13 contain vastly more dot-torrent files for the works identified in Exhibit A than are
14 reflected in the preliminary download count reflected therein. The true U.S.
15 download count for Plaintiffs' works is thus likely to be much higher than the
16 number of downloads already accounted for in Exhibit A. The process of
17 identifying and analyzing more dot-torrent files in Defendants' web server logs that
18 correspond to Plaintiffs works is ongoing, and, as requested by Plaintiffs' counsel, I
19 will continue to update the U.S. download counts accordingly.

20 19. It should also be noted that the fact that some dot-torrent files appear
21 for multiple works is not surprising. Often a single dot-torrent file contains multiple
22 works, such as several seasons of a TV show or an entire collection of the movies
23 from a popular movie franchise, such as the Harry Potter series of movies. For
24 example, the dot-torrent file "Friends box set Season 1. to 10. Everything!" that
25 corresponds to the Season 2, Episode 2 of the TV show Friends also contained the
26 entire season of that show, including all 242 episodes.

1 corresponds to the Season 2, Episode 2 of the TV show Friends also contained the
2 entire series of that show, including all 242 episodes.

3 **Defendants' IP Address Country Designations**

4 20. Finally, Plaintiffs' counsel asked me to check the accuracy of [REDACTED]

5 [REDACTED]
6 [REDACTED] I performed this
7 check as part of my own independent geolocation analysis that I described above.
8 And, when I looked up the IP address in the GeoIP® database for each server log
9 entry, I added to the beginning of each server log entry the country designation
10 listed in the GeoIP® database (*e.g.*, US highlight in bold below):

11 [REDACTED]
12 [REDACTED]
13 21. [REDACTED]
14 [REDACTED]
15 [REDACTED]
16 [REDACTED]

17 I declare under penalty of perjury under the laws of the United
18 States of America that the foregoing is true and correct.

19 Executed on September 30, 2013

20 
21 Bruce J. Ward
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